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ORIGINAL ARTICLE

Windows, Doors and More

by Deputy Chief Michael Terpak

As much time as firefighters dedicate to reviewing and preparing for the challenges of light-weight constructed buildings, it is equally as important to go back and review some of the challenges found in older structures, especially if your community or area of responsibility has a large number of these type buildings.

Many years ago as a young firefighter assigned to a Ladder Company 12 in Jersey City, I can remember an older seasoned firefighter who took me under his wing and telling me that after a room or floor is burned out in an older frame or brick building, it was important to pull and remove all the door and window trim in the apartment – *Great advice that we continue to pass on to our new firefighters today* – That firefighter went on to explain that the space between the rough opening and the window and door can vary as much as a ¼ of an inch to a few inches depending upon a number of factors that affected the installation at that time. This area, where the plaster and lath of the wall ends and the door or the window begins, is only protected by the trimmed wood covering. If the wood trim is compromised in any way, or if the trim covering has a significant charring, fire can burrow into and behind the furred out spaces around the door and window openings. If fire or a significant amount of heat is allowed into this space, most notably to the backside of the plaster and lath covering, it will allow fire to spread behind the window and door enclosures and into the buildings void spaces. "At the very least," he said, "you have to anticipate that if these areas are compromised, fire can smolder for hours and eventually spread." The point he was trying to make was simple… *open it up*!

While advising me of the above concern, he also spoke of two other overlooked areas within old frame and brick structures, those being the window ballast pockets and the possible presence of sliding pocket doors.

<u>Window ballast pockets</u>: Window ballast pockets can be found in old double-hung wooden sash window enclosures. If an older window is still in use, a clue of a window ballast pocket will come from the presence of a rope or chain lining the inside of the windows track. Pieces of rope or chain were often fastened to cast iron weights that were hidden within pockets on the sides of the window frame. This tubular shaped piece of cast iron was designed to slide up and down within the pockets to counter the weight of the windows slide allowing the window to stay open.

The cast iron weight averages around 2" in diameter, 10" in length, and can weigh as much as five pounds. The weights design and shape allows it to ride up and down in the vertical channel or pocket for the entire height of the window. In many older buildings, renovations have replaced the older wooden window sashes with newer and smaller replacement windows.

Replacement windows; however, are often installed within the same opening as the older window leaving the original voids or pockets still in place. For ease and speed with the new window installation, window installers have been known to cut the rope or chain attached to the older wooden sash windows, allowing the ballast weight to fall and remain in their original pockets. This practice allows the older wooden sash windows to simply be removed making room for the new and smaller window to be installed within the existing opening. But as new and solid as the new window replacement will appear, if fire compromises any of the new decorative wood trim that wraps around it, the original void space will allow fire to travel in and behind the structures walls.

Sliding pocket doors: Sliding pocket doors were incorporated into an apartment or home to give privacy between rooms. The doors are often large in size and designed to be pulled from opposite sides of the wall opening. The interior wall that houses the pocket or opening is a wider framed wall than the other walls within the building, allowing for the entire sliding door to disappear within. As firefighters, two immediate concerns must come to mind; *first*, if the doors are still in use today, the fire has early and easy access into the sliding doors opening or pocket. *Second* is the width of the pocket door wall. This is a much wider wall that is not only designed to house a sliding pocket door, but is also a large opening into the buildings structure. This opening could easily allow fire to gain access to the building's void spaces.

Because of their aesthetic value, many pocket doors are still in use today. For those that are no longer in use, don't just assume that the owner or occupants have had the door openings properly trimmed over. Even if they did, this may delay fire from extending in and behind the walls, but if fire compromises the wooden trim, fire can still easily extend to the buildings void spaces. When you come across one of these doors either while on duty or off, take a moment to look at how it's constructed.

Transoms: Transoms are small windows designed and installed above a door or window opening. Their original intent was to allow light and possibly air into a room. They are most commonly found in older frame dwellings, schools, row frames, multiple dwellings and brownstones; however, you may also find them in newer and modern homes and offices due to their aesthetic value and appearance.

In many older installations, homeowners may have restored their use appearance to add to the home's decor. But as decorative as some may appear, they present a significant concern to firefighting forces. With older transom designs, all that prevented fire from penetrating the opening was a single pane of glass. Also in older designs, transoms openings were mounted on hinges to allow airflow. Opening and closing of the transom was accomplished by pulling on a chord or decorative chain. If left open, or if the

hinge mechanism failed or was damaged, smoke and eventual fire would penetrate the opening sooner.

What caused a great concern to fire fighters years ago and still to some degree today was a transom opening installed over an apartment door in a multiple dwellings. As fire spreads throughout an apartment in a multiple dwelling, the single pane glass in the transom would quickly fail, allowing fire and smoke into the public hallway. Over the years, city fire codes required the openings to be covered by plywood or sheetrock/gypsum. But as the years pass, these coverings can become compromised and present the same dangers they did years ago.

My mentor from Ladder Co.12 advised to me to take a quick look at the condition of the transom openings on the fire floor, especially when we were assigned to search the floor above the fire. He stressed the importance of being aware of these designs, and said, "*If they fail before the engine company has water on the fire, the staircase will become compromised requiring us to have additional means of egress sought out, so let's be prepared."* Sound advice I still pass on today.

As we continue to share information and educate our members, it is important that the information sharing include the old as well as the new.

Stay Safe!

This article is written in memory of Firefighter Frank Salerno
Ladder Co. 12 - Jersey City